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Factors Associated with Propensity for Sustainable Entrepreneurship

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Abstract

Entrepreneurship has both positive and negative contributions to our society. On the negative side, the degradation of environmental quality caused by entrepreneurial activities requires serious attention. As such, sustainable entrepreneurship has been suggested as an attempt to alleviate environmental problems. However, embarkation of small and medium enterprises (SMEs) on environmental management is still not promising. Furthermore, there are scant studies in regard to motivation and propensity in the development of sustainable entrepreneurs among SMEs practitioners. Thus, this study was conducted to address the factors associated with propensity for sustainable entrepreneurship among owners-managers of SMEs. A total of 249 SMEs were randomly selected as the sample of this study and surveyed through self-administered questionnaires. Based on the descriptive analyses, this paper found that owners-managers of SMEs generally possessed positive or favorable attitude towards sustainability, concerned about social pressures on sustainability, perceived that sustainable entrepreneurship was attractive and perceived themselves as having sufficient ability for sustainable entrepreneurship. Furthermore, they also exhibited high level of propensity for becoming sustainable entrepreneurs. The correlation analysis revealed that all the hypotheses were supported. Specifically, sustainability attitude, social norm, perceived desirability and perceived feasibility recorded positive association with propensity for sustainable entrepreneurship. However, perceived feasibility recorded a stronger strength of association than sustainability attitude, social norm and perceived desirability. This paper also suggested that future researchers should employ different types of analyses and could attempt to investigate the actual sustainable entrepreneurial behavior among SMEs.

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Keywords: Correlation, Entrepreneurship; Propensity; Sustainability

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1. Introduction

Entrepreneurship has contributed greatly to a nation's economic and non-economic development. It creates jobs, improves products and processes, establishes new business firms, changes people's life etc. However, entrepreneurial activities have also caused market failure, which has consequently reduced the quality of our environment (Cohen & Winn, 2007). Various environmental problems, such as global warming and over utilization of scarce and non-renewal resources are requiring quick rectification. Unfortunately, these problems still remain unresolved although businesses have attempted to do so decades ago (Keijzers, 2002).

Since entrepreneurial activities are regarded as a cause of environmental degradation, entrepreneurs themselves have to play a part in managing the sustainability issues (Hockerts & Wüstenhagen, 2010; O'Neil & Ucbasaran, 2011; Parrish, 2010; Tilley & Young, 2009). The effort of linking entrepreneurship to sustainability management has developed a new discipline called "sustainable entrepreneurship" (Dean & McMullen, 2007). Although sustainable entrepreneurship has been popularized for years, it still receives low acceptance from small- and medium-sized business practitioners.

In Malaysia, it was found that businesses which reported their sustainability practices were mainly large and listed corporations (ACCA, 2010, 2011). Furthermore, sustainable development initiatives were also mainly exercised by giant multinational manufacturers such as Panasonic, General Electric (GE) and Toyota (MPC, 2010). Information in regards to sustainable practices among small and medium enterprises (SMEs) still remains scarce. As Omar and Samuel (2011) asserted, SMEs embarkation on environmental management was still less promising than larger firms.

Undoubtedly, the involvement of SMEs in sustainability management requires positive decisions from owners-managers or key decision makers of SMEs. Since the decision making process is related to cognitive process, it is thus vital to understand how cognitive aspects affect the decision. However, researchers have overlooked the influence of cognitive elements on entrepreneurial actions (Zachary & Mishra, 2011). Specifically, not much has been studied in regards to motivation and propensity in the development of sustainable entrepreneurs. The lack of knowledge on factors associated with sustainable entrepreneurial behavior could lead to poor planning and waste of resources in sustainable entrepreneurship development.

Realizing the existence of the above gaps, this study was geared towards the following objectives: (i) To investigate the factors associated with propensity for sustainable entrepreneurship among SMEs; (ii) To examine the level of propensity for sustainable entrepreneurship among SMEs and; (iii) To determine the correlation between the motivating factors and propensity for sustainable entrepreneurship among SMEs.

2. Literature Review

2.1. Propensity for Sustainable Entrepreneurship

Entrepreneurship has been considered as an important contributor to a country's economical and non-economical development (Fayolle, 2007). Recently, there is a new concept known as "sustainable entrepreneurship" which links sustainable development to entrepreneurship (Schaltegger & Wagner, 2008). Over the years, various researchers have used the term interchangeably with other terms such as "ecopreneurship" (Gerlach, 2003), "environmental entrepreneurship" (Dixon & Clifford, 2007; Krueger, 2005; Schlange, 2006) or "green entrepreneurship" (Chick, 2009). Based upon Majid and Koe (2012: 300), this study regarded sustainable entrepreneurship as "a process in which entrepreneurs exploit the opportunities in an innovative manner for economic gains, society equity, environmental quality and cultural preservation on an equal footing."

Entrepreneurship is intentional and a planned behavior (Krueger, Reilly & Carsrud, 2000). Individuals would only decide to take up entrepreneurial activities after they were triggered by certain stimuli and gone through some careful mental thoughts. One psychological or cognitive aspect which deserves careful scrutiny in entrepreneurship study is entrepreneurial propensity. It is important because it influences people's behavior towards entrepreneurship, such as initiating a new venture. The same process applies to sustainable entrepreneurship as well. The cognitive process plays a vital part in making a decision to engage in sustainable entrepreneurship.

Previous studies have described entrepreneurial propensity differently. For instance, entrepreneurial propensity has been regarded as "individual's favorable predisposition towards new venture creation" by Chelariu, Brashear, Osmonbekov and Zait (2008). Meanwhile, Wang and Wong (2004) described it as "interest in starting new

business". In addition, Phan, Wong and Wang (2002) treated entrepreneurial propensity as "likelihood or interest to start business", or simply "intention to start new business". Although the above studies have dissimilar descriptions on entrepreneurial propensity, they shared one common ground. They unanimously referred the term to a person's possibility of engaging in entrepreneurial activities, such as starting a new business. Furthermore, no actual entrepreneurial actions were involved.

This paper followed the description of Phan *et al*. (2002), in which propensity was treated as intention. Acording to Ajzen (1991: 181), intention is "the indication of how hard people are willing to try or how much an effort they are planning to exert, in order to perform a behavior". It is also a good predictor of behavior. Simply put, intention leads to actual behavior. As such, this paper regarded propensity for sustainable entrepreneurship as "intention to treat the objectives of economical, social, environmental and cultural equally in an entrepreneurial business."

2.2. Factors Affecting Propensity for Sustainable Entrepreneurship

Individuals who possess intention towards a behavior would demonstrate a favorable evaluation or simply known as "positive attitude" on that particular behavior (Ajzen, 1991). In other words, it can be said that attitude influences a person's intention towards behaving in certain manners. In many extant literatures, attitude has been found as important factor of entrepreneurial intention (e.g.: do Paço, Ferreira, Raposo, Rodrigues & Dinis, 2011; Fini, Grimaldi, Marzocchi & Sobrero, 2009; Schwartz, 2009). In regards to environmental practices, sustainability attitude was also considered as a main predictor of pro-environment intention (Tonglet, Philips & Read, 2004). It was also an important determinant of exercising sustainability practices in businesses (Schick, Marxen & Freimann, 2005). Thus, it can be said that sustainability attitude predicts propensity for sustainable entrepreneurship.

A person's behavior is also affected by his or her social pressures. As Ajzen (1991) asserted, pressures from society or "social norm" would determine whether or not to perform a particular behavior. Simply put, influence from others in the society could affect a person's intention to adopt a specific behavior. For instance, Moriano, Gorgievski, Laguna, Stephen and Zarafshani (2012) and Kautonen, Tornikoski and Kibler (2011) found social norm significantly and positively related to entrepreneurial intention. As for intention towards sustainable behavior, it was significantly influenced by social pressures such as opinions from other individuals or parties (Vermeir & Verbeke, 2008). Moreover, social norm and ecological behavioral intention was also significantly and positively related to each other (Birgelen,Semeijn & Keicher 2009). Meek, Pacheco and York (2010) also supported that social norm was vital in affecting a person's environmental entrepreneurial actions. Therefore, social norm could be deemed as a predictor of propensity for sustainable entrepreneurship.

Individuals' perceptions also play an important role in determining their behavioral intention. Specifically, entrepreneurship researchers such as Shapero and Sokol (1982) and Liñán, Rodríguez-Cohard and Rueda-Cantuche (2005) have regarded that "perceived desirability" and "perceived feasibility" were deemed as two important factors influencing individuals' entrepreneurial behavior. According to them, "perceived desirability" was related to a person's perception on attractiveness of a behavior; while "perceived feasibility" was associated with a person's perception on his or her abilities and capabilities. Perceived desirability has been confirmed as an influential factor for new venture creations (Diochon, Gasse, Menzies & Garand, 2002) and self-employed (Segal, Borgia & Schoenfeld, 2005). Furthermore, it was also found as a significant influence of entrepreneurial intention (Guerrero, Rialp & Urbano, 2008; Fitzsimmons & Douglas, 2011). To certain extent, perceived feasibility was deemed as overlapping with "self-efficacy" introduced by Bandura (2002). For instance, Fitzsimmons and Douglas (2011), Guerrero *et al*. (2008) and Liñán *et al*. (2005) have used the terms simultaneously. As Chen, Greene and Crick (1998) mentioned, self-efficacy could be considered a good predictor for intention. In addition, Liñán *et al*. (2005) and Segal *et al*. (2005) have also concluded that perceived feasibility (self-efficacy) was a significant antecedent to intention towards entrepreneurship or being self-employed. Since both perceived desirability and perceived feasibility have been well tested in predicting intention towards entrepreneurial behavior, this paper considered perceived desirability and perceived feasibility also predict propensity for sustainable entrepreneurship.

In short, based on the above arguments, this paper hypothesized that:

H1: There is a positive correlation between sustainability attitude and propensity for sustainable entrepreneurship.
H2: There is a positive correlation between social norm and propensity for sustainable entrepreneurship.
H3: There is a positive correlation between perceived desirability and propensity for sustainable entrepreneurship.
H4: There is a positive correlation between perceived feasibility and propensity for sustainable entrepreneurship.

3. Research Methodology

3.1. Population and Sample

The population of this study was small and medium enterprises (SMEs) registered in the directory of SME Corp Malaysia. The key respondents were owners-managers or key decision makers of SMEs. A total of 1000 questionnaires were randomly distributed to the respondents. After two reminders were sent to the participants, the researchers successfully collected 256 responses; however, only 249 were deemed usable for further analyses. As such, the response rate was 24.90%. It is worth mentioning that the data collection process is still on-going at the point of time this paper was written.

3.2. Instrument of Research

This study used survey method to collect the data. A self-administered questionnaire consisted of three sections (Section A, B and C) and 60 items was developed for this purpose. All items were designed in 10-point Likert-type rating scales to ease the respondents in making their choice by simply rating "out of ten" (Dawes, 2008). Specifically, 1 denoted "strongly disagree", 5 meant "slightly disagree", 6 referred to "slightly agree" and 10 represented "strongly agree". All items were adapted from previous established studies to ensure their reliability and validity. Table 1 summarizes the information of questionnaire used in this study.

Table 1. Information of questionnaire

Variable	No. of Item	Source	α
Section A			
Respondent's Profile	5	Designed by researchers	N/A
Section B			
Sustainability attitude	15	Braun (2010)	0.74
Social norm	8	Kennedy *et al.* (2003) and Nasurdin *et al*. (2009)	0.89
Perceived desirability	8	Nasurdin *et al*. (2009) and Moriano *et al*. (2011)	0.84
Perceived feasibility	18	McGee et al. (2009)	0.96
Section C			
Propensity	6	Liñán & Chen (2009)	0.90

4. Findings and Discussion

4.1. Profiles of Respondents

Table 2 summarizes the SMEs owners-managers' background information. More than two-third of the SMEs were owned by male (71.49%). The dominating sector of SMEs was servicing (57.03%) followed by manufacturing (32.53%). For the forms of business, majority of SMEs were owned by sole proprietor (69.08%) followed by corporations (20.48%) and partnership (10.44%). It was also found that about half of the SMEs employed 5-50 employees (53.23%) and have established for less than 10 years (58.64%).

Table 2. Background of respondents

Characteristics	N = 249	
	F	%
Owner's Gender		
Male	178	71.49
Female	71	28.51
Sector of Firm		
Servicing	142	57.03
Manufacturing	81	32.53
Construction	13	5.22
Agriculture	5	2.01
Others	8	3.21
Form of Business		
Sole proprietorship	172	69.08
Partnership	26	10.44
Corporations	51	20.48
No. of Employees		
Less than 5	43	16.58
5 – 50	137	57.43
51 – 150	69	25.99
Years of Establishment		
Less than 5	61	24.50
5 – 10	85	34.14
11 – 15	72	28.92
More than 15	31	12.45

4.2. Mean and Standard Deviation Analysis

Table 3 shows the values of mean and standard deviation for sustainability attitude. This variable was measured by 15 items. All items recorded a mean value of greater than 6.00 (slightly agree). The overall mean was 7.22 and standard deviation was 1.07. Two items were found to have a mean greater than 8.00, they were Item SA13 "The earth has plenty of natural resources" (M = 8.22; S.D. = 1.67) and Item SA15 "Make the earth a better place to live" (M = 8.12; S.D. = 1.81). Meanwhile, Item SA7 "Environmental crisis has been exaggerated" obtained the lowest mean of 6.39 and standard deviation of 2.15. The results indicated that respondents were generally agreed that they possessed positive or favorable sustainability attitude.

Table 3. Mean and standard deviation for sustainability attitude

Item	Description	M	S.D.
SA1	Nature cope with minimal impacts	6.57	2.12
SA2	Nature is weak and easily damage	7.07	2.24
SA3	Minimal rights to modify nature	6.46	2.04
SA4	Plants and animals have rights	7.10	2.01
SA5	Interference with nature produces disastrous results	7.36	1.79
SA6	Soon experience a major environmental disaster	7.80	1.74
SA7	Environmental crisis has been exaggerated	6.39	2.15
SA8	Earth has limited space and resources	7.02	2.22
SA9	Humana are subject to the laws of nature.	7.59	1.64
SA10	Humans rule over nature	6.44	2.38
SA11	Earth approaching limit of number of people	6.71	2.06
SA12	Severely abusing the environment	7.61	1.64
SA13	The earth has plenty of natural resources	8.22	1.67
SA14	Learn enough about how nature works	7.94	1.81
SA15	Make the earth a better place to live	8.12	1.81
	Overall Value	7.22	1.07

Table 4 depicts the results of mean and standard deviation analysis in regards to social norm. This variable was operationalized by using eight items. Mean values for all items were above 6.00 (slightly agree), in which seven of them were above 7.00. In particular, Item SN3 "Care about important individual's thinking" recorded the highest mean value (M = 7.62; S.D. = 1.73). Item SN8 "Other business owner's belief" obtained the lowest mean (M = 6.94; S.D. = 2.15). Again, the results showed that respondents agreed that they concerned about social pressures.

Table 4. Mean and standard deviation for social norm

Item	Description	M	S.D.
SN1	Care about closest family's thinking	7.58	1.86
SN2	Care about closest friend's thinking	7.29	1.96
SN3	Care about important individual's thinking	7.62	1.73
SN4	Care about other business owner's thinking	7.04	1.91
SN5	Closest family's belief	7.44	1.72
SN6	Closest friend's belief	7.31	1.82
SN7	Important individual belief	7.33	1.79
SN8	Other business owner's belief	6.94	2.15
	Overall Value	7.32	1.49

Table 5 presents the distribution of means and standard deviation for perceived desirability. To measure this variable, eight items were developed. Interestingly, all items of this variable jotted a mean value of above 7.00. Item PD6 "Desirable to be creative and innovative" secured the highest mean (M = 7.62; S.D. = 1.61). There were two items recorded the lowest mean (M = 7.25), they were Item PD4 "Desirable to face new sustainability challenges" and Item PD5 "Desirable to create new sustainability products" with standard deviation of 1.71 and 1.65 respectively. Therefore, in regards to perceived desirability, respondents perceived that sustainable entrepreneurship was attractive.

Table 5. Mean and standard deviation for perceived desirability

Item	Description	M	S.D.
PD1	Love to operate sustainable business	7.60	1.65
PD2	Enjoy to operate sustainable business	7.60	1.58
PD3	Enthusiastic to operate sustainable business	7.46	1.68
PD4	To face new sustainability challenges	7.25	1.71
PD5	To create new sustainability products	7.25	1.65
PD6	To be creative and innovative	7.62	1.61
PD7	To obtain high incomes	7.59	1.78
PD8	Take calculated risks	7.28	1.59
	Overall Value	7.46	1.36

Table 6 illustrates the mean and standard deviation for perceived feasibility. A total of 18 items were used to measure this variable. The overall mean was 7.06 (S.D. = 1.47). All items obtained a mean value of greater than 6.00 (slightly agree). Specifically, Item PF12 "Delegating sustainability tasks" obtained the highest mean of 7.21 (S.D. = 1.67); while Item PF13 "Dealing effectively with sustainability problems" stated the lowest mean of 6.85 (S.D. = 1.76). The results pointed out that respondents agreed that they perceived themselves as having enough ability for sustainable entrepreneurship.

Table 6. Mean and standard deviation for perceived feasibility

Item	Description	M	S.D.
PF1	Identify need for sustainability product/service	7.13	1.63
PF2	Design sustainability product/service	7.10	1.72
PF3	Estimate customer demand	6.98	1.74
PF4	Determine price for sustainability product/service	7.00	1.74
PF5	Estimate funds for sustainable business	6.95	1.72
PF6	Design marketing/advertising campaign	7.11	1.79
PF7	Identify and believe visions	7.18	1.63
PF8	Make contact on sustainability issues	7.12	1.66
PF9	Explain sustainable ideas	6.96	1.68
PF10	Supervise employees towards sustainability	7.13	1.63
PF11	Recruit employees who practice sustainability	7.16	1.79
PF12	Delegate sustainability tasks	7.21	1.67
PF13	Deal with sustainability problems	6.85	1.76
PF14	Motivate employees towards sustainability	7.13	1.70
PF15	Train employees for sustainability	6.98	1.71
PF16	Organize and maintain financial records	6.99	1.81
PF17	Manage the financial assets	7.07	1.85
PF18	Read and interpret financial statements	7.08	1.73
	Overall Value	**7.06**	**1.47**

Table 7 shows the analysis of mean and standard deviation for propensity for sustainable entrepreneurship. There were six items related to this variable. The overall mean was 6.93 with standard deviation of 1.73. The individual mean value for all items was above 6.00 (slightly agree). Particularly, Item PR5 "Have seriously thought of it" obtained the highest mean (M = 7.20; S.D. = 2.05). The lowest mean was recorded by Item PR2 "Have professional goal" (M = 6.61; S.D. = 2.14). As such, the respondents agreed that they owned certain level of propensity for sustainable entrepreneurship and were rather positive about becoming sustainable entrepreneurs.

Table 7 Mean and standard deviation for propensity for sustainable entrepreneurship

Item	Description	M	S.D.
PR1	Ready to do anything	6.87	2.12
PR2	Have professional goal	6.61	2.14
PR3	Make every effort	6.81	2.16
PR4	Am determined enough	6.93	2.20
PR5	Have seriously thought of it	7.20	2.05
PR6	Have firm propensity	7.13	1.92
	Overall Value	6.93	1.73

4.3. Correlation Analysis

In order to measure and interpret the strength of association or relationship between two continuous variables, correlation analysis can be used. Specifically, Pearson's product moment correlation coefficient (r) can be used to indicate the strength and the direction of the correlation (Zou, Tuncali & Silverman 2003). Based on Zou *et al*. (2003), the values in Table 8 were used to interpret the strength of correlation between variables.

Table 8. Strength of correlation

Correlation Coefficient (r)	Strength
0.00	No association
±0.20	Weak
±0.50	Moderate
±0.80	Strong
±1.00	Perfect association

Table 9. Pearson correlation analysis

		Propensity for Sustainable Entrepreneurship
Sustainability Attitude	Pearson Correlation	0.381**
	Sig. (2-tailed)	0.000
Social Norm	Pearson Correlation	0.434**
	Sig. (2-tailed)	0.000
Perceived Desirability	Pearson Correlation	0.493**
	Sig. (2-tailed)	0.000
Perceived Feasibility	Pearson Correlation	0.545**
	Sig. (2-tailed)	0.000

N = 249 respondents

**. Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 9, the results indicated that all the four motivating factors, i.e.: sustainability attitude, social norm, perceived desirability and perceived feasibility were positively and significantly correlated to propensity for sustainable entrepreneurship (p-value < 0.01). As such, when individuals has favorable sustainability attitude, concern about social pressures, perceive sustainable entrepreneurship as attractive and perceived themselves as having ability for sustainable entrepreneurship, they also possess propensity for sustainable entrepreneurship. In terms of strength of association with propensity for sustainable entrepreneurship, sustainability attitude (r = 0.381), social norm (r = 0.434) and perceived desirability (r = 0.493) were having weak strength, while and perceived feasibility (r = 0.545) was found to have moderate strength. Therefore, all the hypotheses (H1 to H4) were supported.

4.4. Discussion

As mentioned by Ajzen (1991), both attitude on a specific behavior and social pressures from others in the society could affect individual's intention to behave in a specific manner. In addition, Shapero and Sokol (1982) and Liñán *et al*. (2005) have also mentioned the role of individuals' perceptions on behavioral intention. The descriptive analysis found that owners-managers of SMEs demonstrated positive or favorable attitude on sustainability and were concerned about social pressures from others in regards to their sustainability practices. As for owners-managers' perceptions, they regarded sustainable entrepreneurship as attractive and recognized themselves as having the necessary capabilities in becoming sustainable entrepreneurs. As such, it was not surprising to find that they exhibited rather high level of propensity for sustainable entrepreneurship.

Based on the statistical analysis, the four motivating factors were positively associated with propensity for sustainable entrepreneurship. It confirmed that all the four hypotheses were supported. Although sustainability attitude, social norm and perceived desirability were found to have positive and weak associations with propensity to sustainable entrepreneurship, they are important in encouraging SMEs practitioners to engage in sustainable practices. As supported by previous studies, attitude is not only important in determining entrepreneurial intention (do Paço *et al*., 2011; Fini *et al*., 2009; Schwartz, 2009) but also sustainability behavior (Tonglet *et al*., 2004; Schick *et al*., 2005). Therefore, fostering a positive sustainability attitude among SMEs operators are definitely needed in developing sustainable entrepreneurship.

Furthermore, social norm is also related to intention towards entrepreneurial behavior (Moriano *et al.*, 2012; Kautonen *et al.*, 2011) and sustainability behavior (Birgelen *et al.*, 2009; Meek *et al*., 2010; Vermeir & Verbeke, 2008). Thus, linkages and rapid interactions among SMEs are important in encouraging more owners-managers to engage in sustainable entrepreneurship. Past literatures have found the significant influence of perceived desirability on entrepreneurial intention (Guerrero *et al*., 2008; Fitzsimmons & Douglas, 2011). As such, some efforts in promoting sustainable entrepreneurship as an attractive business model or appealing business practices should be exerted.

Interestingly, this paper found that perceived feasibility recorded a positive and moderate relationship with propensity to sustainable entrepreneurship. As confirmed by Liñán *et al*. (2005) and Segal *et al*. (2005), the relevant capabilities and abilities possessed by individuals have been considered as a good predictor for intention. As a result, training and development courses should be provided to equip the SMEs operators with the necessary sustainability skills, capabilities and abilities.

5. Conclusion

This study was conducted to study the factors associated with propensity for sustainable entrepreneurship among SMEs in Malaysia. Generally, owners-managers of SMEs agreed that they possessed positive or favorable sustainability attitude, concerned about social pressures on sustainability, perceived that sustainable entrepreneurship was attractive and perceived themselves as having sufficient ability for sustainable entrepreneurship. In addition, the owners-managers of SMEs also exhibited certain level of propensity for sustainable entrepreneurship. This showed that they were rather favorable or positive about becoming sustainable entrepreneurs. As compared to sustainability attitude, social norm and perceived desirability, perceived feasibility has a stronger association with propensity for sustainable entrepreneurship.

This paper is not without any limitations. For instance, only descriptive analyses were presented. The statistical test performed was correlation analysis. Thus, future researchers are recommended to extend the types of analyses performed. Additionally, this study only focused on propensity for sustainable entrepreneurship, future studies could attempt to investigate the actual sustainable entrepreneurial behavior as well.

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